CLAIMS

What is claimed is:

1. An electroluminescent display EL device comprising:

a substrate;

a first electrode unit comprising:

first electrodes formed on the substrate in a predetermined pattern, and

first electrode terminals connected to the respective first electrodes;

a second electrode unit comprising:

second electrodes formed on the first electrodes, and

second electrode terminals connected to the respective second electrodes;

an emission area formed where the first electrodes intersect the second electrodes;

an electroluminescent layer disposed between the first electrodes and the second electrodes in the emission area; and

an outer insulating layer between the emission area and the second electrode terminals;

wherein the outer insulating layer comprises an insulating material formed to contact at least an edge of the second electrode terminals facing the emission area to reduce a steepness of a step between the second electrode terminal and the substrate.

2. The EL device of claim 1, further comprising an inter insulating layer provided under the electroluminescent layer and covering a space between each of a plurality of lines of the first electrodes.

3. The EL device of claim 2, wherein the inter insulating layer defines the first electrodes.

4. The EL device of claim 1, wherein the substrate comprises glass or plastic.

5. The EL device of claim 1, wherein each of the second electrode terminals comprises a first terminal portion made of indium tin oxide (ITO), and a second terminal portion made of chrome (Cr).

6. The EL device of claim 1, wherein the first electrode terminals are integrally formed with the first electrodes.

7. The EL device of claim 1, wherein the outer insulating layer covers the edge of each of the second electrode terminals facing the emission area.

8. The EL device of claim 1, wherein the outer insulating layer covers at least an edge of the first electrode closest to the second electrode terminals covered by the outer insulating layer.

9. The EL device of claim 7, further comprising via holes formed at portions of the outer insulating layer covering the edge of the second electrode terminals, so that the second electrodes and the second electrode terminals are electrically connected to each other, respectively, through the via holes.

10. The EL device of claim 7, wherein the second electrodes pass over the outer insulating layer to contact the second electrode terminals.

11. The EL device of claim 1, wherein the second electrodes cover the outer insulating layer.

12. The EL device of claim 1, further comprising a first buffer layer insulated from the first electrodes and the second electrode terminals, wherein the first buffer layer is formed between the outer insulating layer and the substrate.

13. The EL device of claim 12, wherein the first buffer layer comprises a same material as the first electrodes.

14. The EL device of claim 13, wherein the first buffer layer and the first electrodes are comprised of ITO.

15. The EL device of claim 1, further comprising a second buffer layer provided over a top surface of the substrate, wherein the second buffer layer maintains smoothness of the top face of the substrate, and prevents impurities from being introduced from the substrate.

16. The EL device of claim 15, wherein the second buffer layer comprises SiO_2.

17. An electroluminescent display EL device comprising:

a substrate;

a first electrode unit comprising:

first electrodes formed on the substrate in a predetermined pattern, and

first electrode terminals connected to the respective first electrodes;

a second electrode unit comprising:

second electrodes formed on the first electrodes, and

second electrode terminals connected to the respective second electrodes;

an emission area formed where the first electrodes intersect the second electrodes;

an electroluminescent layer disposed between the first electrodes and the second electrodes in the emission area; and

an insulating layer formed under the electroluminescent layer;

wherein the insulating layer is provided between each of a plurality of lines of the first electrodes, and at a space between the second electrode terminals and the first electrode adjacent thereto.

18. The EL device of claim 17, wherein the insulating layer is provided in a lattice form covering at least a space between each of the lines of the first electrodes and portions corresponding to the first electrodes in the emission area.

19. The EL device of claim 17, wherein the insulating layer contacts or covers an edge of the second electrode terminals facing the emission area outside the emission area, and reduces a steepness of a step between the second electrode terminals and the substrate.

20. The EL device of claim 17, wherein the insulating layer covers the second electrode terminals and an edge of the first electrode adjacent to the second electrode terminals.

21. The EL device of claim 17, further comprising a buffer layer insulated from the first electrodes and the second electrode terminals, wherein the buffer layer is formed between a portion of the insulating layer and the substrate, said portion of the insulating layer covering a space between the second electrode terminals and the first electrode adjacent thereto.

22. A method of manufacturing an electroluminescent display EL device, the method comprising:

forming first electrode terminals and second electrode terminals along edges of a substrate;

forming first electrodes having a predetermined pattern, the first electrodes connected to the first electrode terminals;

forming an insulating layer covering at least a space between each of a plurality of lines of the first electrodes and a space between the second electrode terminals and the first electrode adjacent thereto;

forming an electroluminescent layer on at least each of the first electrodes; and

forming second electrodes on the electroluminescent layer, wherein the second electrodes are connected to the second electrode terminals.

23. The method of claim 22, wherein the insulating layer covers at least a portion of each of the second electrode terminals and an edge of the first electrode adjacent to the second electrode terminals, wherein the edge of the first electrode faces the second electrode terminals.

24. The method of claim 23, further comprising forming via holes at portions of the insulating layer covering the second electrode terminals, wherein the via holes are formed during the forming of the insulating layer.

25. The method of claim 22, further comprising forming a first buffer layer during the forming of the first electrodes, wherein the first buffer layer is formed at a space between the second electrode terminals and the first electrode adjacent thereto using the same material as that of the first electrodes, so as to be spaced a predetermined distance apart from, and insulated from, the first electrodes and the second electrode terminals.